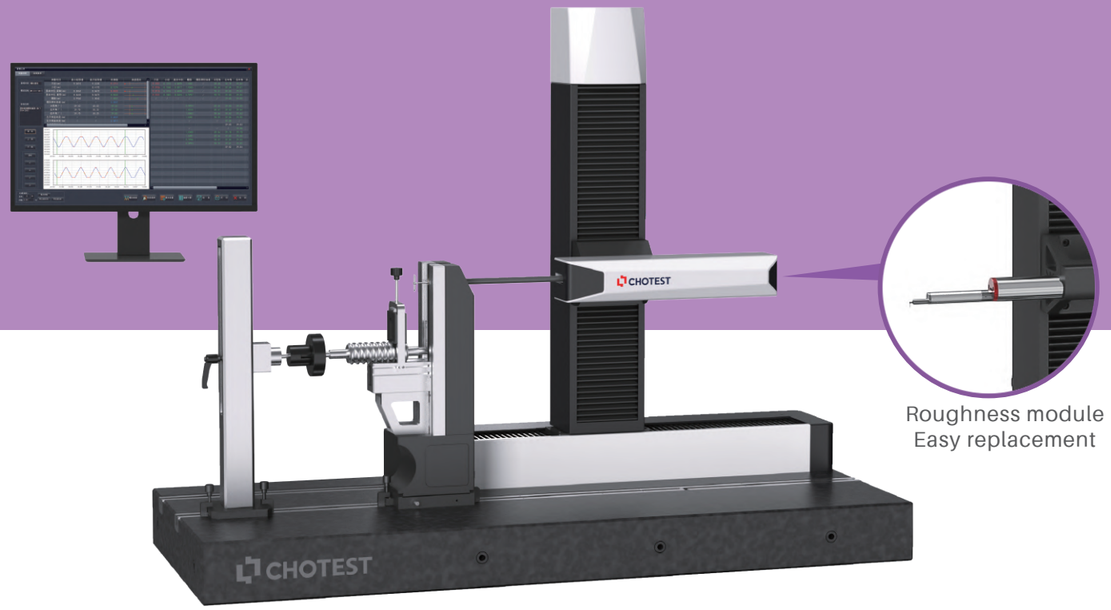
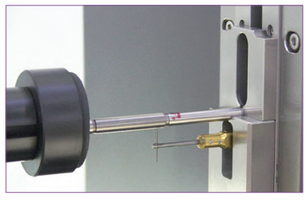
SJ5780 Series Intelligent Profilometer

Multi-Sided Scanning
Dedicated for Cylindrical and Threaded workpieces

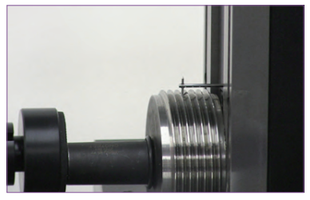


Roughness module
Easy replacement

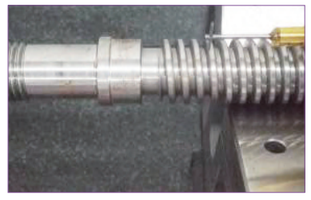
Application



Coaxiality of lead screw

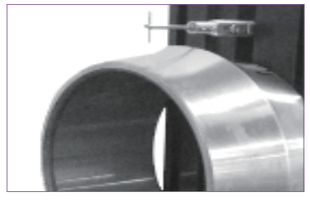


Thread gauge

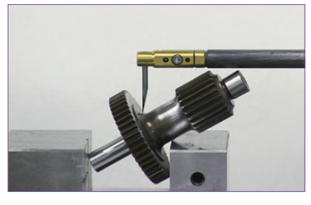


Trapezoidal lead screw

Ballscrew



Cylindrical workpiece



Gear

Features

1. Two-sided profile scanning function

It obtains profile of object by scanning the surface with T-shaped stylus, then software can calculate the 2D sizes and GD & T based on the profile.

2. Thread scanning function

It can scan ordinary thread ring/plug gauges, tapered thread ring/plug gauges, plain ring/plug gauges, trapezoidal thread, sawtooth thread, multi-head threaded workpieces, lead screws, etc. Then the software can analyze their comprehensive parameters such as internal and external diameter, profile parameters, etc.

Parameters

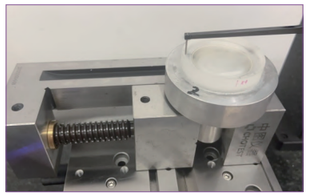
Model No.			SJ5780-200	SJ5780-300	SJ5780-400
Basic Spec.	Measuring Range	X	0~235mm	0~325mm	0~400mm
		Z	0~235mm	0~325mm	0~400mm
	Min Resolution		0.001μm		
	Scanning Speed		0.1~2mm/s		
	Measuring Force		10~150mN(Adjustable)		
	Max Slope		Uphill 78°, downhill 87°		
	Y Direction Object Table		Travel range 25mm, Overall height 85mm(Motorized table is optional)		
Thread Meas.	Thread Measuring Range		Internal: M3~M200, External: M3~M200(Determined by optional jigs)		
	Accuracy(Maj., Pit., Min. Diamter)		≤±(4+L/100)μm, L is measured length in mm		
	Accuracy(Thread Pitch)		≤±(1 +L/100)μm, L is measured length in mm		
Contour Meas.	Diameter Measuring Range		Internal: ϕ3~ϕ200, External: ϕ3~ϕ200(Determined by optional jigs)		
	Diameter Measuring Accuracy		≤±(3+L/100)μm, L is measured length in mm		
	Profile Degree Accuracy		≤±(2 +L/100)μm, L is measured length in mm		
Roughness Meas. (Optional)	Roughness Parameters		R roughness: Rp, Rv, Rz, Rc, Rt, Ra, Rq, Rsk, Rku, RSm, RPc, Rdq, Rdc, Rmr, Rmax, Rpm, tp, Htp, Pc, Rda, Ry, Sm, S, Rpq, Rvq, Rmq, RzJ, Rv1max, Rp1max, Rz1max, Rmr(Rz/4), maxRa, R5z, R3z, Rh, Dq, Lq, SD Key roughness: Rcore: Rk, Rpk, Rvk, Mr1, Mr2, A1, A2 Profile: Pa, Pq, Pt, Pz, Pp, Pv, PSm, Psk, Pku, Pdq, Pdc, Pc, PPc, Pvq, Pmr, Pmq, Rad, PzJ, Pmax, StpHt, TIR, Avg, Slope, Area+, Area-, Area, Profl, Edge, StpWd, Bumpht Waviness of profile: Wa, Wq, Wt, Wz, Wp, Wv, WSm, Wsk, Wku, Wdq, Wdc, Wmr, Wpc, Wc, Wh, Wmr(WZ/4) Motif: R, AR, W, AW, Rx, Wx, Wte, Nr, Ncrx, Nw, Cpm, CR, CF, CL ISO5436: Pt5436, D		
	Ra Measuring Range		Ra0.1μm~Ra64μm		
	Accuracy		5%		
	Filter		2RC filtering, Gaussian filtering and Zero phase filtering		
	Sampling Length		0.008, 0.08, 0.25, 0.8, 2.5, 8.0, 25mm selectable		
	Evaluation Length		Automatic calculation		
	Cutoff Wavelength		0.25/0.8/2.5(mm) or User-defined cut-off		
Size(L×W×H)			1200×490×980mm	1200×490×1180mm	1200×490×1180mm
Weight			240kg	260kg	260kg

SJ5720-OPT Series
Profilometers for Optics Surface

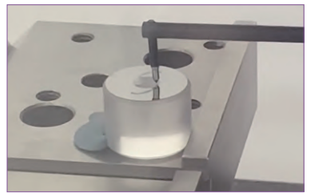
SJ5720-OPT100

SJ5720-OPT200

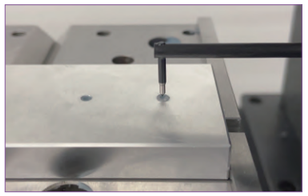
Application



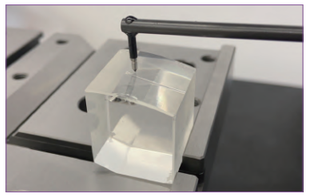
Lens



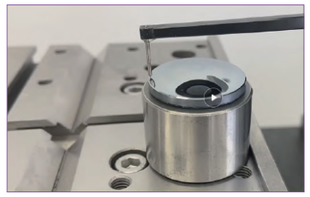
Intraocular lens mold



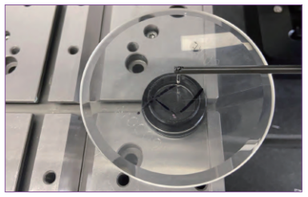
Vehicle Lens



Infrared lens



Optical mold



Lens

Description

The SJ5720-OPT series is a capable to measure both surface roughness and profile after once scanning. Moreover, there is a dedicated software module for measurement and analysis of large aspheric surface, so this series is an ideal measurement solution for the optical lens industry.

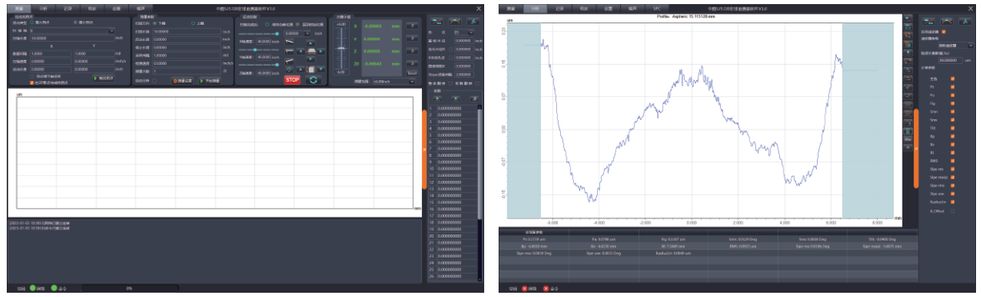
It can also be used for profile and roughness measurement for large curved surface, such as bearings, artificial joints, precision molds, gears, blades, etc. Consequently, it is widely used in precision machining, automobiles, bearings, machine tools, molds, precision hardware and other industries.

Features

1. Evaluate profile and roughness parameters at the same time after once scanning
2. High precision, high stability, and high repeatability
3. Aspheric optical software module
4. Intelligent management and advanced software analysis system
5. Intelligent protection system during scanning
6. Flexible manual control
7. High stability vibration isolation system

Software

- Professional aspheric surface measurement software can analyze all aspheric surface.
- parameters. There are some self-checking parameters in the software, so the correctness of the input formula can be determined by self-checking.



Aspheric surface measurement interface

Parameters

Model No.			SJ5720-OPT100
Contour Measurement	Measuring Range	X	0~100mm
		Z	0~300mm
		Z1	±6mm （Optional: ±12mm）
	Resolution		0.001μm
	Accuracy	Z1*1	≤±(0.5+0.03 H) μm (H, mm)
		Pt*2	Pt≤0.2μm
		Standard Ball*3	≤±(1+R/20) μm (R, mm)
		Angle*4	≤±1′
	Moving Speed	X	0~20mm/s
		Z	0~20mm/s
	Scanning Speed		0.05～5mm/s
	X Straightness*5		≤0.15μm/100mm
	Measuring Force		0.5mN，0.75mN，1mN，2mN，3mN(Adjustable)
Roughness Measurement	Ra Masurement Range		Ra0.012μm~Ra12.5μm (Large range is optional)
	Accuracy*6		Ra0.012μm ~ Ra3 . 2 μm: ≤±(3nm+2.0%A),A(Ra)μm Ra3.201μm ~ Ra12.5μm : ≤±(3nm+3.5%A),A(Ra)μm
	Repeatability (1δ)*7		1δ≤1nm
	Measurement Residual*8		Rq≤3nm
	Roughness Parameters		R roughness: Rp, Rv, Rz, Rc, Rt, Ra, Rq, Rsk, Rku, RSm, RPc, Rdq, Rdc, Rmr, Rmax, Rpm, tp, Htp, Pc, Rda, Ry, Sm, S, Rpq, Rvq, Rmq, RzJ, Rv1max, Rp1max, Rz1max, Rmr(Rz/4), maxRa, R5z, R3z, Rh, Dq, Lq, SD Key roughness: Rcore: Rk, Rpk, Rvk, Mr1, Mr2, A1, A2 Profile: Pa, Pq, Pt, Pz, Pp, Pv, PSm, Psk, Pku, Pdq, Pdc, Pc, PPc, Pvq, Pmr, Pmq, Rad, PzJ, Pmax, StpHt, TIR, Avg, Slope, Area+, Area-, Area, Profl, Edge, StpWd, Bumpht Waviness of profile: Wa, Wq, Wt, Wz, Wp, Wv, WSm, Wsk, Wku, Wdq, Wdc, Wmr, Wpc, Wc, Wh, Wmr(WZ/4) Motif: R, AR, W, AW, Rx, Wx, Wte, Nr, Ncrx, Nw, Cpm, CR, CF, CL ISO5436: Pt5436, D
	Aspheric Masurement Parameters		Micro profile parameters: Pt, Pa, Fig;Inclination parameters: Smx , Smn ; Horizontal axis angle parameter: Tilt; Distance parameters between the optical axis and the contour: Xp , Xv , Xt ; Root mean square roughness parameter: RMS; Slope parameters: Slpe mx , Slpemx (x), Slperms, Slpe are ; Vertex radius error parameter: Radius Err
	Filter		Gaussian filter, 2RC filter, zero phase filter
	Sampling Length		0.008, 0.08, 0.25, 0.8, 2.5, 8.0 or 25mm Selectable
	Evaluation Length		Auto calculation
Size(L×W×H)			600×350×890mm
Weight			tt

Note:
*1 The accuracy is based on the measurement standard gauge block.
*2 The accuracy is based on the Pt test of standard ball smaller than diameter 25mm.
*3 The accuracy is based on the verification of the Φ 50mm standard ball with the arc exceeds 90 degrees.
*4 The accuracy is based on the measurement of the angle of polygonal prism.
*5 The accuracy is based on the measurement of optical flat.
*6 The accuracy is based on the measurement of standard roughness block.
*7 The repeatability is based on the measurement of 0.1-0.2μm square wave roughness block and standard step height block.
*8 The accuracy is is based on the measurement of 1nm level roughness block and optical flat.

Profilometers for Optics Surface
Contact Measurement Instruments

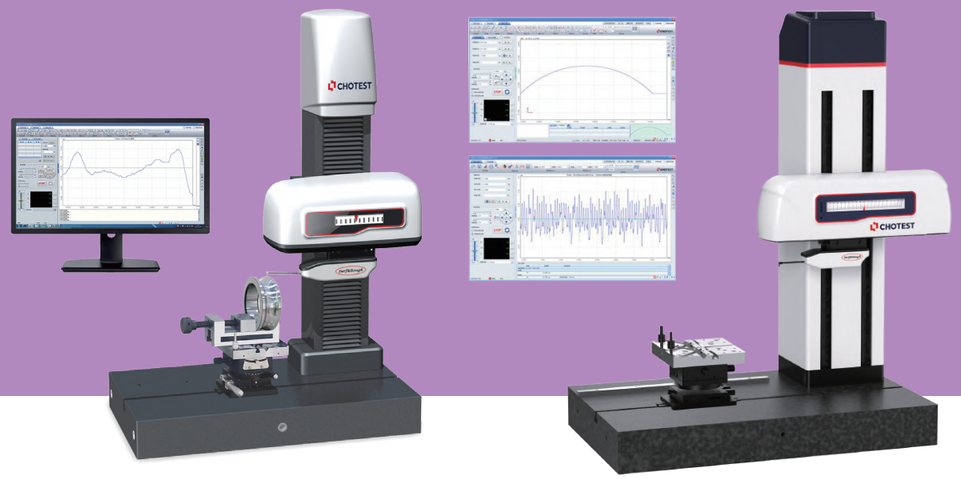
Parameters

Model No.			SJ5720-OPT200
Contour Measurement	Measuring Range	X	0~200mm
		Z	0~500mm
		Z1	±6mm (Optional: ±12mm)
	Resolution		0.001μm
	Accuracy	Z1*1	≤±(0.5+0.03 H) μm (H, mm)
		Pt*2	Pt≤0.2μm
		Standard Ball*3	≤±(1+R/20) μm (R, mm)
		Angle*4	≤±1′
	Moving Speed	X	0~20mm/s
		Z	0~20mm/s
	Scanning Speed		0.05～5mm/s
	X Straightness*5		≤0.25μm/200mm
	Measuring Force		0.5mN，0.75mN，1mN，2mN，3mN(Adjustable)
Roughness Measurement	Ra Masurement Range		Ra0.012μm~Ra12.5μm
	Accuracy*6		Ra0.012μm ~ Ra3 . 2 μm: ≤±(3nm+2.0%A),A(Ra)μm Ra3.201μm ~ Ra12.5μm : ≤±(3nm+3.5%A),A(Ra)μm
	Repeatability (1δ)*7		1δ≤1nm
	Measurement Residual*8		Rq≤3nm
	Roughness Parameters		R roughness: Rp, Rv, Rz, Rc, Rt, Ra, Rq, Rsk, Rku, RSm, RPc, Rdq, Rdc, Rmr, Rmax, Rpm, tp, Htp, Pc, Rda, Ry, Sm, S, Rpq, Rvq, Rmq, RzJ, Rv1max, Rp1max, Rz1max, Rmr(Rz/4), maxRa, R5z, R3z, Rh, Dq, Lq, SD Key roughness: Rcore: Rk, Rpk, Rvk, Mr1, Mr2, A1, A2 Profile: Pa, Pq, Pt, Pz, Pp, Pv, PSm, Psk, Pku, Pdq, Pdc, Pc, PPc, Pvq, Pmr, Pmq, Rad, PzJ, Pmax, StpHt, TIR, Avg, Slope, Area+, Area-, Area, Profl, Edge, StpWd, Bumpht Waviness of profile: Wa, Wq, Wt, Wz, Wp, Wv, WSm, Wsk, Wku, Wdq, Wdc, Wmr, Wpc, Wc, Wh, Wmr(WZ/4) Motif: R, AR, W, AW, Rx, Wx, Wte, Nr, Ncrx, Nw, Cpm, CR, CF, CL ISO5436: Pt5436, D
	Aspheric Masurement Parameters		Micro profile parameters: Pt, Pa, Fig;Inclination parameters: Smx , Smn ; Horizontal axis angle parameter: Tilt; Distance parameters between the optical axis and the contour: Xp , Xv , Xt ; Root mean square roughness parameter: RMS; Slope parameters: Slpe mx , Slpemx (x), Slperms; Vertex radius error parameter: Radius Err
	Filter		Gaussian filter, 2RC filter, zero phase filter
	Sampling Length		0.008, 0.08, 0.25, 0.8, 2.5, 8.0 or 25mm Selectable
	Evaluation Length		Auto calculation
Size(L×W×H)			800×500×1080mm
Weight			265kg

Note:
*1 The accuracy is based on the measurement standard gauge block.
*2 The accuracy is based on the Pt test of standard ball smaller than diameter 25mm.
*3 The accuracy is based on the verification of the Φ 50mm standard ball with the arc exceeds 90 degrees.
*4 The accuracy is based on the measurement of the angle of polygonal prism.
*5 The accuracy is based on the measurement of optical flat.
*6 The accuracy is based on the measurement of standard roughness block.
*7 The repeatability is based on the measurement of 0.1-0.2μm square wave roughness block and standard step height block.
*8 The accuracy is is based on the measurement of 1nm level roughness block and optical flat.

Profilometer SJ5730

Once Scanning for both Profile and Roughness



SJ5730-100

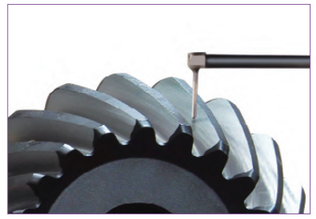
SJ5730-200

Parameters

Parameter classification		Parameters
Roughness Measurement	Contour Evaluation	P(Original profile), R(Surface roughness profile), W(Waviness)
	Rougness Evaluation	Ra, Rp, Rv , Rz, Rt, Rmax , Rq , Rsk , Rku , RSm , RPc , Rdq , Rdc , Rmr , Motif parameters, RCore parameters, P parameters, W parameters
	Filter	2RC filtering, Gaussian filtering and Zero phase filtering
	Cut-off Wavelength λs	0.008, 0.025, 0.08, 0.25, 0.8, 2.5, 8mm selectable
	λs	0.25, 0.8, 2.5, 8, 25um selectable, comply with the specifications of JJF 1099-2018, ISO 4288-1996, GBT 1031-2009
	Shape Error	Aspheric surface shape error measurement, linear shape error measurement, arc surface shape error measurement
	Standard	DIN EN ISO 4287:2010, ASME B46.1-2002, JIS B 0601:2013, GB/T 3505-2009, ISO 4287:1997, ISO 13565-2:1996, ISO 1302:2002
Contour Measurement	Common tools	Provides 76 tools, including coordinate creation, construction tools, auxiliary tools, annotations, and geometric tolerances
	CNC Function	Provide CNC measurement mode for batch measurement
	Custom Meas.	Customize the measurement process according to the characteristics of the workpiece (such as surface with hole in the center), avoids the unnecessary measurement area and perform discontinuous measurement.
	Special Tools	Ball screw measurement (corrected helix angle), thread measurement, stage height, groove depth, groove width, area, convexity etc

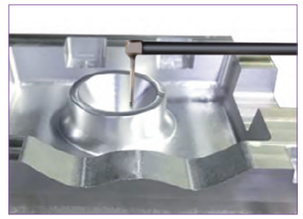
Application

Pt & Ra of bearing raceway

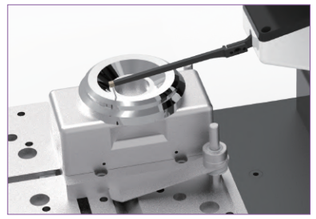


Ra of gear tooth surface

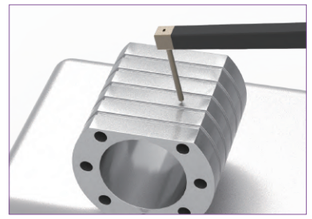
Ra of engine blade



Ra & Profile of mold



Profile & Roughness of car parts



Profile & Roughness of workpiece

Features

1. Evaluate Contour and roughness parameters at the same time after once scanning
2. High precision, high stability, and high repeatability
3. Intelligent management and advanced software analysis system
4. Intelligent protection system during scanning
5. Flexible manual control
6. Nano-scale large roughness measuring range
7. Plug-in probe, easy to replace probe
8. Extremely small measuring force to avoid scratching the surface

Parameters

Model No.			SJ5730-100
Contour Measurement	Measuring Range	X	0~100mm
		Z	0~300mm
		Z1	±6mm （Optional: ±12mm）
	Resolution		0.001um
	Accuracy	Z1*1	≤±(0.5+0.03 H) μm (H, mm)
		Pt*2	Pt≤0.4μm
		Standard Ball*3	≤±1μm(R≤10mm)；≤±(0.17+R/12) μm (10<R≤200mm)
		Angle*4	≤±1′
	Moving Speed	X	0~20mm/s
		Z	0~20mm/s
	Scanning Speed		0.05~5mm/s
	X Straightness*5		≤0.2μm/100mm
	Measuring Force		0.5mN,0.75mN,1mN,2mN,3mN(Adjustable)
Roughness Measurement	Ra Masurement Range		Ra0.012μm~Ra12.5μm
	Accuracy*6		Ra0.012μm ~ Ra3 . 2 μm: ≤±(3nm+2.0%A),A(Ra)μm Ra3.201μm ~ Ra12.5μm : ≤±(3nm+3.5%A),A(Ra)μm
	Repeatability (1δ)*7		1δ≤1nm
	Measurement Residual*8		Rq≤3nm
	Roughness Parameters		R roughness: Rp, Rv, Rz, Rc, Rt, Ra, Rq, Rsk, Rku, RSm, RPc, Rdq, Rdc, Rmr, Rmax, Rpm, tp, Htp, Pc, Rda, Ry, Sm, S, Rpq, Rvq, Rmq, RzJ, Rv1max, Rp1max, Rz1max, Rmr(Rz/4), maxRa, R5z, R3z, Rh, Dq, Lq, SD Key roughness: Rcore: Rk, Rpk, Rvk, Mr1, Mr2, A1, A2 Profile: Pa, Pq, Pt, Pz, Pp, Pv, PSm, Psk, Pku, Pdq, Pdc, Pc, PPc, Pvq, Pmr, Pmq, Rad, PzJ, Pmax, StpHt, TIR, Avg, Slope, Area+, Area-, Area, Profl, Edge, StpWd, Bumpht Waviness of profile: Wa, Wq, Wt, Wz, Wp, Wv, WSm, Wsk, Wku, Wdq, Wdc, Wmr, Wpc, Wc, Wh, Wmr(WZ/4) Motif: R, AR, W, AW, Rx, Wx, Wte, Nr, Ncrx, Nw, Cpm, CR, CF, CL ISO5436: Pt5436, D
	Filter		Gaussian filter, 2RC filter, zero phase filter
	Sampling Length		0.008, 0.08, 0.25, 0.8, 2.5, 8.0 or 25mm Selectable
	Evaluation Length		Auto calculation
Roller analysis			Roller convexity, position distance, logarithmic roller busbar, X-mirror curve coincidence, segmented different tolerances
Input			AC100-240V, 50/60Hz, 130W
Size(L×W×H)			600×350×890mm
Weight			110kg

Note:
*1 The accuracy is based on the measurement standard gauge block.
*2 The accuracy is based on the Pt test of standard ball smaller than diameter 25mm.
*3 The accuracy is based on the verification of the Φ 50mm standard ball with the arc exceeds 90 degrees.
*4 The accuracy is based on the measurement of the angle of polygonal prism.
*5 The accuracy is based on the measurement of optical flat.
*6 The accuracy is based on the measurement of standard roughness block.
*7 The repeatability is based on the measurement of 0.1-0.2μm square wave roughness block and standard step height block.
*8 The accuracy is is based on the measurement of 1nm level roughness block and optical flat.

Profilometers

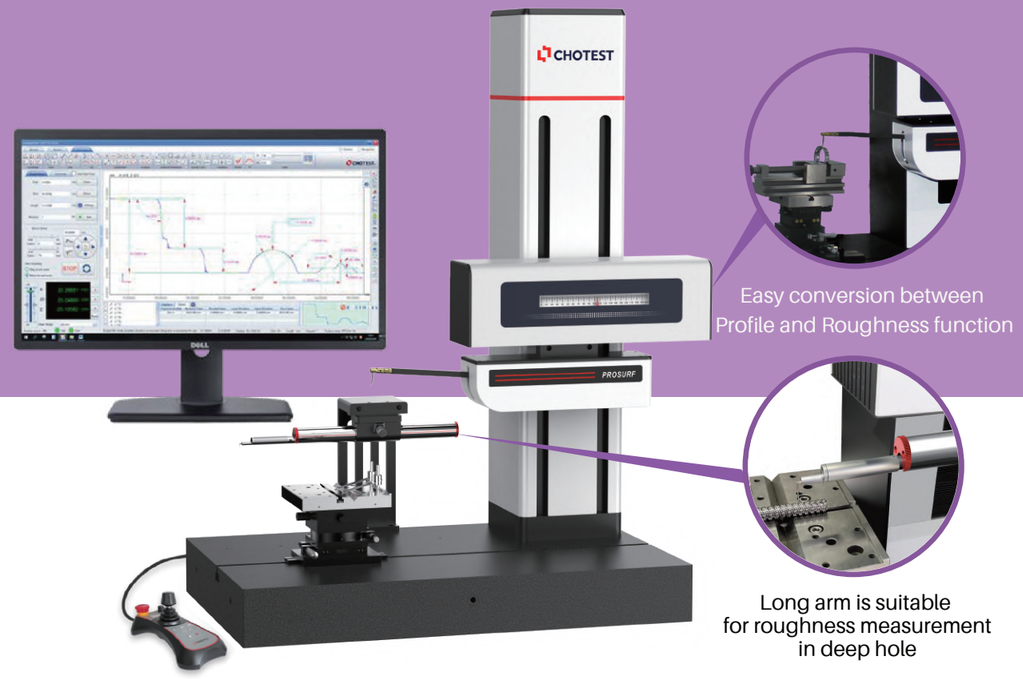
Parameters

Model No.			SJ5730-200
Contour Measurement	Measuring Range	X	0~200mm
		Z	0~500mm
		Z1	±6mm (Optional: ±12mm)
	Resolution		0.001um
	Accuracy	Z1*1	≤±(0.5+0.03 H) μm (H, mm)
		Pt*2	Pt≤0.4μm
		Standard Ball*3	≤±1μm(R≤10mm)；≤±(0.17+R/12) μm (10<R≤200mm)
		Angle*4	≤±1′
	Moving Speed	X	0~20mm/s
		Z	0~20mm/s
	Scanning Speed		0.05~5mm/s
	X Straightness*5		≤0.35μm/200mm
	Measuring Force		0.5mN,0.75mN,1mN,2mN,3mN(Adjustable)
Roughness Measurement	Ra Masurement Range		Ra0.012μm~Ra12.5μm
	Accuracy*6		Ra0.012μm ~ Ra3 . 2 μm: ≤±(3nm+2.0%A),A(Ra)μm Ra3.201μm ~ Ra12.5μm : ≤±(3nm+3.5%A),A(Ra)μm
	Repeatability (1δ)*7		1δ≤1nm
	Measurement Residual*8		Rq≤3nm
	Roughness Parameters		R roughness: Rp, Rv, Rz, Rc, Rt, Ra, Rq, Rsk, Rku, RSm, RPc, Rdq, Rdc, Rmr, Rmax, Rpm, tp, Htp, Pc, Rda, Ry, Sm, S, Rpq, Rvq, Rmq, RzJ, Rv1max, Rp1max, Rz1max, Rmr(Rz/4), maxRa, R5z, R3z, Rh, Dq, Lq, SD Key roughness: Rcore: Rk, Rpk, Rvk, Mr1, Mr2, A1, A2 Profile: Pa, Pq, Pt, Pz, Pp, Pv, PSm, Psk, Pku, Pdq, Pdc, Pc, PPc, Pvq, Pmr, Pmq, Rad, PzJ, Pmax, StpHt, TIR, Avg, Slope, Area+, Area-, Area, Profl, Edge, StpWd, Bumpht Waviness of profile: Wa, Wq, Wt, Wz, Wp, Wv, WSm, Wsk, Wku, Wdq, Wdc, Wmr, Wpc, Wc, Wh, Wmr(WZ/4) Motif: R, AR, W, AW, Rx, Wx, Wte, Nr, Ncrx, Nw, Cpm, CR, CF, CL ISO5436: Pt5436, D
	Filter		Gaussian filter, 2RC filter, zero phase filter
	Sampling Length		0.008, 0.08, 0.25, 0.8, 2.5, 8.0 or 25mm Selectable
	Evaluation Length		Auto calculation
Roller analysis			Roller convexity, position distance, logarithmic roller busbar, X-mirror curve coincidence, segmented different tolerances
Input			AC100-240V, 50/60Hz, 130W
Size(L×W×H)			800×500×1080mm
Weight			180kg

Note:
*1 The accuracy is based on the measurement standard gauge block.
*2 The accuracy is based on the Pt test of standard ball smaller than diameter 25mm.
*3 The accuracy is based on the verification of the Φ 50mm standard ball with the arc exceeds 90 degrees.
*4 The accuracy is based on the measurement of the angle of polygonal prism.
*5 The accuracy is based on the measurement of optical flat.
*6 The accuracy is based on the measurement of standard roughness block.
*7 The repeatability is based on the measurement of 0.1-0.2μm square wave roughness block and standard step height block.
*8 The accuracy is is based on the measurement of 1nm level roughness block and optical flat.

Profilometer SJ5760 Series

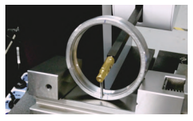
Independent Profile and Roughness Measurement Module

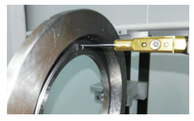


Easy conversion between Profile and Roughness function

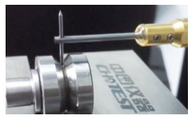
Long arm is suitable for roughness measurement in deep hole

Application

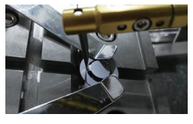

Bearing


Railway part


Thread workpiece

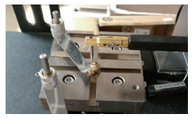

Car parts

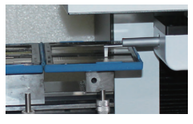

Ballscrew

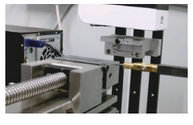

Stamping part


Thread workpiece


Gear

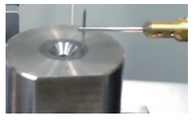

Machining part


Roughness specimen


Plastic part


Engine cylinder


Custom bearing

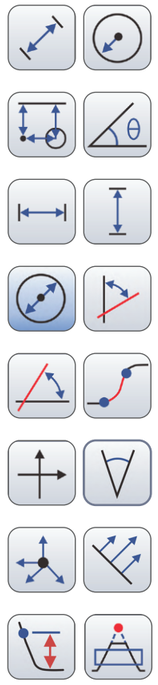

Mold


Die casting

Software

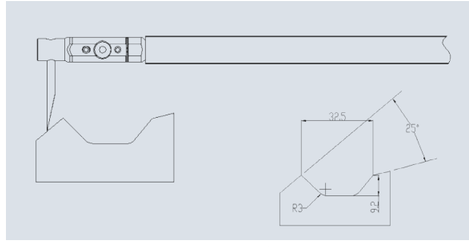
Surf & Rough X is an user-friendly and powerful software, which is completely developed by Chotest. It can analyze not only surface contour, but also evaluate surface roughness. Surf & Rough X contains 76 kinds of utility tools, such as coordinate system, construction tools, geometric tolerance, surface roughness assessment tools, etc. CNC measurement mode is a convenient function for batch measurement, and it improves measurement efficiency greatly. Moreover, discontinuous measurement function is also available for the special workpieces.

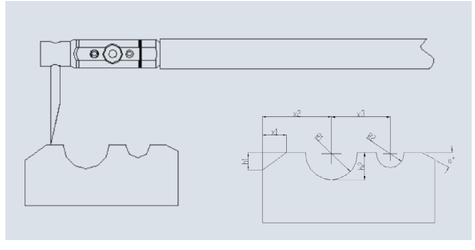
Functions



GD & T	Straightness, roundness, position degree, parallelism, perpendicularity, profile tolerance, etc.
Custom Program	The measurement process can be customized according to the characteristics of the workpiece (Set the probe to jump deep holes, steep slopes or obstacles).
CNC Mode	The one-key measurement program can be built for batch measurement. If the tolerance is also entered to the program, the measurement result will be automatically judged as OK or NG.
Coordinate system	Coordinate system could be established by point-line or line-line, and it could be translated and rotated.
Special Tool	Ball screw shaft measurement(corrected helix angle),thread measurement, step height, groove depth, groove width, area, curvature, etc.
Report	Export report in .doc, .xls or .pdf, and support user-defined report template.
Contour Comparison	After import CAD drawing to the software, the user can compare the difference between drawing and scanning contour.
Roughness	Ra, Rp, Rv, Rz, Rt, Rmax, Rq, Rsk, Rku, RSm, RPc, Rdq, Rdc, Rmr, Pa,Pq, Pt, Pp, Pv, Psm, Psk, Pku, Pdq, Plq, Pdc, PHSC, Ppc, PMr, Waviness of Profile, Motif, etc.

Profile Example





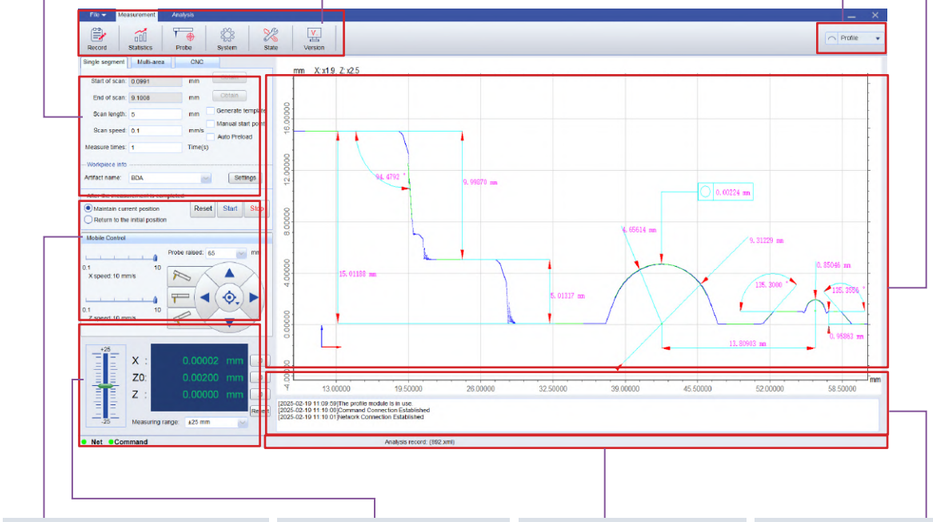
Software

Scanning Settings:
Set measuring conditions,Inspection info andscanning positions.

System Setting:
Differenet function modules.

Switch meas. function:
Switch between profile measurement and roughness measurement.

Scanning graph window:
Display the scanning graph and perform the analysis operation.



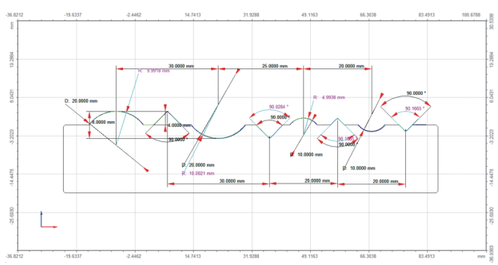
Motion control:
Control probe to move ↑, ↓, ←, →, and stop,reset.

Coordinate display:
Display the coordinates of current probe position.

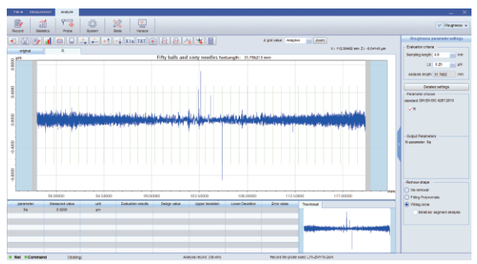
Status Bar:
Network, serial port, unit,operation tips, login time,user name, etc.

Analysis data:
List features, measured data and tolerance.

Measurement Interface



Contour measurement

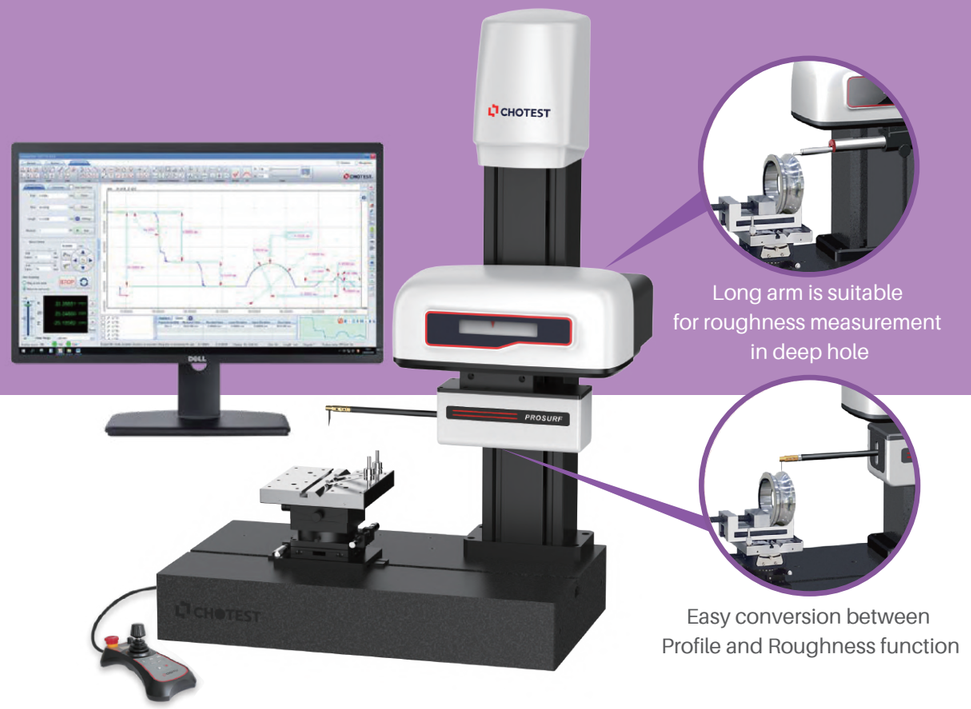


Roughness measurement

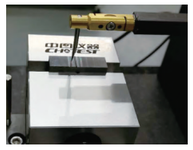
Parameters

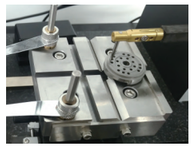
Model No.		SJ5760-PR
Travel Range	X	0~200mm
	Z	0~450mm
Size(L×W×H)		800×450×1100mm
Weight		220Kg
Contour Measurement(SJ5760-P)		
Measuring Range	Z1	±25mm
	Resolution	0.001μm
Indication Error	X	±(0.6+0.015L)μm(L , mm)
	Z1	±(0.6+0.05H)μm(H , mm)
	Standard Ball	≤±(1+R/15)μm(R , mm)
	Angle error	≤±1′
Moving speed	X	0~20mm/s
	Z	0~20mm/s
Scanning Speed		0.05~5mm/s
Max Slope		Uphill 77°, downhill 88°
Straightness		≤1μm/200mm
Scanning Force		10~70mN Adjustable(Larger force is optional)
Roughness Measurement(SJ5760-R)		
Measuring Range	Z0	±400μm(Optional:±1000μm)
	Sensor Type	Railless
	Ra Range	Ra0.1μm~Ra64μm
Scanning Force		1mN
Resolution	Z0	0.001um
Indication Error		≤±(5nm+2.5%A)μm, A(Ra)μm
Repeatablity		≤1nm
Scanning Speed		0.05~0.5mm/s
Measurement Residual		≤0.005μm
Roughness Parameters		R roughness: Rp, Rv, Rz, Rc, Rt, Ra, Rq, Rsk, Rku, RSm, RPc, Rdq, Rdc, Rmr, Rmax, Rpm, tp, Htp, Pc, Rda, Ry, Sm, S, Rpq, Rvq, Rmq, RzJ, Rv1max, Rp1max, Rz1max, Rmr(Rz/4), maxRa, R5z, R3z, Rh, Dq, Lq, SD Key roughness: Rcore: Rk, Rpk, Rvk, Mr1, Mr2, A1, A2 Profile: Pa, Pq, Pt, Pz, Pp, Pv, PSm, Psk, Pku, Pdq, Pdc, Pc, PPc, Pvq, Pmr, Pmq, Rad, PzJ, Pmax, StpHt, TIR, Avg, Slope, Area+, Area-, Area, Profl, Edge, StpWd, Bumpht Waviness of profile: Wa, Wq, Wt, Wz, Wp, Wv, WSm, Wsk, Wku, Wdq, Wdc, Wmr, Wpc, Wc, Wh, Wmr(WZ/4) Motif: R, AR, W, AW, Rx, Wx, Wte, Nr, Ncrx, Nw, Cpm, CR, CF, CL ISO5436: Pt5436, D
Filter		2RC filtering, Gaussian filtering and Zero phase filtering
Sampling Length		0.008, 0.08, 0.25, 0.8, 2.5, 8.0 or 25mm selectable
Evaluation Length		Auto calculation
Film Thickness Measurement	Measuring Range	60μm or less

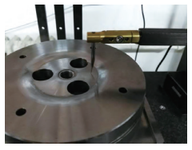
SJ5718 Series Economic Profilometers



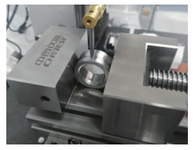
Application


Mechanical part

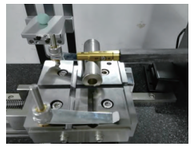

Metallurgy part

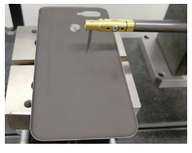

Car wheel

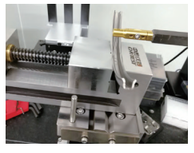

Die casting part


Bearing


Thread part


Battery housing


Phone housing


Machining part


Gearbox pulley

Parameters

Model No.		SJ5718-PR
Travel Range	X	0~100mm
	Z	0~300mm
Size(L×W×H)		600×350×890mm
Weight		120Kg
Contour Measurement(SJ5718-P)		
Measuring Range	Z1	±30mm
	Resolution	0.001um
Indication Error	X	±(0.6+0.02L)μm(L,mm)
	Z1	±(0.6+0.05H)μm(H,mm)
	Standard Ball	≤±(1.2+R/15)μm(R,mm)
	Angle error	≤±1′
Moving speed	X	0~20mm/s
	Z	0~20mm/s
Scanning Speed		0.05~5mm/s
Max Slope		Uphill 77°, downhill 88°
Straightness		≤0.5μm/100mm
Scanning Force		30mN
Roughness Measurement(SJ5718-R)		
Measuring Range	Z0	±400μm(Optional:±1000μm)
	Sensor Type	Railless
	Ra Range	Ra0.1μm~Ra64μm
Scanning Force		1mN
Resolution	Z0	0.001um
Indication Error		≤±(5nm+2.5%A)μm, A(Ra)μm
Repeatablity		≤1nm
Scanning Speed		0.05~0.5mm/s
Measurement Residual		≤0.005μm
Roughness Parameters		R roughness: Rp, Rv, Rz, Rc, Rt, Ra, Rq, Rsk, Rku, RSm, RPc, Rdq, Rdc, Rmr, Rmax, Rpm, tp, Htp, Pc, Rda, Ry, Sm, S, Rpq, Rvq, Rmq, RzJ, Rv1max, Rp1max, Rz1max, Rmr(Rz/4), maxRa, R5z, R3z, Rh, Dq, Lq, SD Key roughness: Rcore: Rk, Rpk, Rvk, Mr1, Mr2, A1, A2 Profile: Pa, Pq, Pt, Pz, Pp, Pv, PSm, Psk, Pku, Pdq, Pdc, Pc, PPc, Pvq, Pmr, Pmq, Rad, PzJ, Pmax, StpHt, TIR, Avg, Slope, Area+, Area-, Area, Profl, Edge, StpWd, Bumpht Waviness of profile: Wa, Wq, Wt, Wz, Wp, Wv, WSm, Wsk, Wku, Wdq, Wdc, Wmr, Wpc, Wc, Wh, Wmr(WZ/4) Motif: R, AR, W, AW, Rx, Wx, Wte, Nr, Ncrx, Nw, Cpm, CR, CF, CL ISO5436: Pt5436, D
Filter		2RC filtering, Gaussian filtering and Zero phase filtering
Sampling Length		0.008, 0.08, 0.25, 0.8, 2.5, 8.0 or 25mm Selectable
Evaluation Length		Auto calculation
Film Thickness Measurement	Measuring Range	60μm or less